



**PATIENT**

Ranger Jacobs

**SPECIES**

Canine

**BREED**

Labrador Retriever Mix

**SEX**

Male Neutered

**AGE**

9.11 years

**WEIGHT**

72lbs

**INTERPRETED BY**

Maggie Machen Lamy,  
DVM, DACVIM  
(Cardiology)

**IMAGING PERFORMED BY**

Danielle Kitz, DVM

**HOSPITAL NAME**

Woodlands Animal  
Hospital

**REFERRING VET**

Dr. Kitz

**INVOICE**

45613

**DATE**

11/2/25

**PRESENTING CLINICAL SIGNS**

History: Recently diagnosed with VPCs. Asymptomatic.

-ECG (10/2025 MML): Frequent single and couplet polymorphic VPCs. Full workup recommended prior to Sotalol.

**ECHOCARDIOGRAM FINDINGS**

2D, m-mode, color flow and doppler imaging is available. Mild MV thickening with no prolapse into the left atrial lumen. Trace mitral regurgitation with a normal left atrial dimension. Normal LV diameter with adequate myocardial function. The tricuspid valve appears normal with no tricuspid regurgitation. Normal right atrial and ventricular diameter and morphology indicating no overt evidence of pulmonary arterial hypertension. The pulmonic and aortic valves are normal in morphology and mobility. Normal pulmonic and aortic outflow velocities with laminar flow. No obvious aortic and trace pulmonic insufficiency. No pericardial or pleural effusion noted. No obvious cardiac masses.

**CARDIAC CHART**

CANINE CARDIAC PARAMETERS	MR VMAX (m/s)	TR VMAX (m/s)	LA/AO (Boon method)	LA/AO (Heart Base; Swe)	FS (%)	EF (%)	EPSS (cm)
NORMAL PARAMETER	4.5-5.5	<2.7	1.3	<1.6	28-40	40-100	<0.6
PATIENT	NM	NA	1.3	1.2	34	60	NM
CANINE CARDIAC PARAMETERS	HR (BPM)	AV VMAX (m/s)	PV MAX (m/s)	BODY WEIGHT (kg)	LA 2D short axis Base view (cm)	LVIDd Avg; 2D and m-mode short axis (cm)	LVIDs Avg; 2D and m-mode short axis (cm)
NORMAL PARAMETER	50-100	0.7-1.7	0.7-1.6	BELOW	BELOW	BELOW	BELOW
PATIENT	NM	2.2	1.4	32.7	2.5	4.4	2.9
*Normal chamber parameters expressed as a mean value (SD)				3	1.27 (5.3)	2.46 (2.46)	1.36 (5.5)
<b>BODY WEIGHT DEPENDENT PARAMETERS</b>				5	1.40 (4.5)	2.74 (5.2)	1.60 (4.7)
*Note: All measurements based upon multi-modal images and methods. An average value is reported.				10	1.50 (3.8)	3.27 (3.5)	2.06 (3.1)
				15	1.83 (2.0)	3.71 (2.4)	2.43 (2.1)
				20	2.02 (1.9)	4.14 (2.2)	2.80 (2.0)
Adapted from June Boon, Veterinary Echocardiography, 1998				25	2.18 (2.4)	4.48 (2.9)	3.10 (2.5)
Rishniw M and Hollis NE, J Vet Intern Med 2000; 14:429-435				30	2.33 (3.3)	4.83 (3.9)	3.39 (3.4)
Hansson et al, Vet Rad and Ultrasound 2002				35	2.48 (4.3)	5.17 (5.0)	3.69 (4.5)
Bonagura et al. Echocardiography: principles of interpretation, Vet Clin North Am 15:1177, 1995				40	2.62 (5.2)	5.48 (6.1)	3.96 (5.4)
				50	2.88 (7.1)	6.07 (8.3)	4.46 (7.4)

**INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

Overtly normal cardiac dimensions and function, with no obvious dysfunction or dilation of the left heart. Trace NR is noted and may reflect early valve disease. Follow up is advised should a murmur develop in the future. No significant valvular leaks are visualized, and no evidence of pulmonary hypertension. No evidence of diet-related cardiomyopathy; however, a diet change remains the conservative recommendation. No obvious inter or extra-cardiac tumors visualized; however, the latter are easily missed in the absence of active effusion. A thoracic CT scan could be considered.



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These findings suggest structural disease is not the cause of the arrhythmia. Sotalol is safe to administer in this patient, as systolic function is intact. If a holter monitor is declined, this should be instituted as below. Further systemic evaluation is still recommended as previously discussed. Risk and additional information regarding the ECG should be referenced in the prior report.

No medications are indicated, and the prognosis is open from a cardiac standpoint.

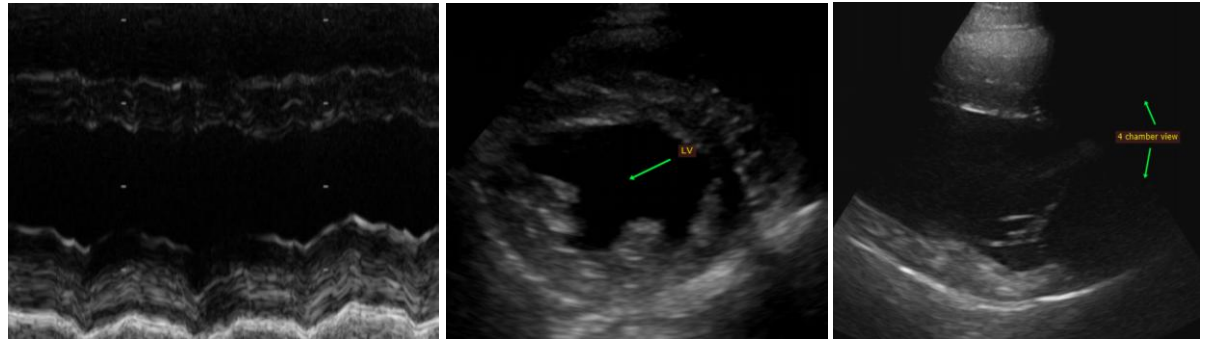
Monitor for development of a heart murmur, cough, labored breathing, exercise intolerance or collapse episodes.

## PLAN

A holter monitor is still recommended, in addition to full systemic workup. If a holter monitor is declined, institute Sotalol 1-2mg/kg PO q12h. Reassess an ECG in 1-2 weeks.

A recheck echocardiogram is recommended in 6-12 months, sooner if a murmur or clinical signs arise.

## IMAGES



The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. This report was generated using transcription software, and minor dictation errors may be present. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance, please contact me.

Maggie Machen Lamy, DVM  
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